To: Leinenbach, Peter[Leinenbach.Peter@epa.gov]; Wu, Jennifer[Wu.Jennifer@epa.gov]; Carlin, Jayne[Carlin.Jayne@epa.gov]; Rueda, Helen[Rueda.Helen@epa.gov]
From: MICHIE Ryan
Sent: Wed 4/10/2013 10:43:54 PM
Subject: RE: Landsat Project re think

Thanks for doing all the investigation on this Peter. I really appreciate it.

Should I follow up with Don Long or is he going to get back to you on the data availability?

Regarding the project proposal. Since time is an issue on this project I proposed to include only 2009, 2011, and 20012 and remove the other years. If we get an answer back from Don in time we can see about removing 2009.

From: Leinenbach, Peter [mailto:Leinenbach.Peter@epa.gov]
Sent: Wednesday, April 10, 2013 12:47 PM
To: MICHIE Ryan; Wu, Jennifer; Carlin, Jayne; Rueda, Helen
Cc: Leinenbach, Peter
Subject: RE: Landsat Project re think

Ryan –

I gave Marc Weber at Corvallis EPA a call about the potential availability post 2008 Disturbance maps from the Landfire project (Marc used to work at Landfire before coming on at EPA).

He forwarded me to Greg Dillon (406 829 6783) at the USFS Rock Mountain Research Station (RMRS) but Greg is not longer working on Landfire.

However, Greg forwarded me to Don Long at the RMRS (406 329 4706). Don is the last FS person directly working on the Landfire project.

Anyway, they have completed the 2009 and 2010 Disturbance Maps and plan on disseminate them this spring. In fact, they have been done with these maps for a few months and are using them to build the other datasets associated with the Landfire project (He told me that the Disturbance maps were initially considered as a intermediate step and it was not disseminated in the past, however folks like us kept asking for it and so now they give it out). I asked him if it would be possible to get this dataset sooner than the upcoming 'release date', and he said he would look into it and, if it is available (which he is sure but wanted to check for really sure), he would be willing to upload it to a ftp site for us.

I got some other background on this Disturbance dataset (I am putting this down so that I have notes from my calls, and to tell you about it). They develop this dataset in order to update the Landfire maps which they use to estimate the fire potential and the other 'magical' things they do during this project. That is, instead of redoing all of the work on these other forest related datasets, they develop this dataset to help them determine areas which have changed since the last image, so they only have to work on these 'changed' areas. This new map making cycle is the 2009 through 2010 period. However, they are going to redo the 2008 dataset because they are utilizing a slightly different methodology from the previous data release (1999 through 2008). That is they are now using the 'mica' method, which is what the NLCD program uses to determine change. This is done b/c mica is better and it is consistent with other efforts (e.g., NLCD). He did not think it made that much of a difference, so you can use the datasets from the different processes together (e.g., 1999 through 2008 and 2009 through 2010). I also have in my notes that the disturbance maps were developed from multiple datasets, including satellite data, forest activity databases (e.g., harvest logs), burn severity maps, and other stuff I did not write down.

I am optimistic about getting this data, but until we get it, it does not exist. Also, they only have it through 2010. I personally think that is awesome to have GIS landcover data from less than 3 years ago, but if you need 2011 and 2012 disturbance data, then we need to go for it and make it.

Peter

From: MICHIE Ryan [mailto:Michie.Ryan@deq.state.or.us]

Sent: Tuesday, April 09, 2013 5:49 PM
To: Leinenbach, Peter; Wu, Jennifer; Carlin, Jayne; Rueda, Helen
Subject: RE: Landsat Project re think

Thanks Peter,

If you guys have any other thoughts about how to structure the landsat project let me know. I'm leaning toward reducing the project scope in Part B dramatically. Here's the attached project proposal with Part B reduced. Let me know what you think.

As far as the other project idea. Basically it would involve downloading all available precipitation data and snow depth data from the various climate data sources (COOP, NCDC, RAWS, etc) for the year 1996 in Western Oregon and SW Washington. From there they would determine the maximum 24 hour rainfall (in 1996) accounting for and including the snow to liquid rain equivalent. The next step would be to interpolate the max 24 hour precipitation into a raster and contour lines.

This data will allow us to calculate the intensity of the 1996 storms as a percent of the normal 100 year 24hour rainfall amount.

This is needed for the landslide analysis because our calibration approach is using landslide inventory data that was collected after the 1996 storms and will allow us to determine the spatial variability of rainfall and test how this relates to the observed landslide density and vegetation conditions. Theoretically it will help us develop a design storm standard for which BMPs can be developed against and maybe a way to predict landslide density under different scenarios (slope, landform type, veg conditions, and rainfall).

From: Leinenbach, Peter [mailto:Leinenbach.Peter@epa.gov]
Sent: Tuesday, April 09, 2013 3:29 PM
To: MICHIE Ryan; Wu, Jennifer; Carlin, Jayne; Rueda, Helen
Cc: Leinenbach, Peter

Subject: RE: Landsat Project re think

Ryan –

I can to the exact same conclusion – I think Landfire does are really good job. I think the Landfire disturbance datasets (1999 through 2008) could be used in combination with the NWFP 1972 through 2002 disturbance dataset to get to the harvest history around this area. That is, Landfire data can be used as recent and annual data, and the NWFP data can be used to show the historic data (note – you can break the NWFP data into other time periods, for example 1972 through 2000).

I think it work so well is that forest harvest in this area is very large clearcuts and they can be 'seen' by the satellite data.

I have attached some images to show how well it works (BTW – there has been a lot of harvest in these watersheds over the past 40 years). Just a note Ryan – It looks like the landfire data seem to have some sort of historic harvest (these are indicated by the yellow and purple color areas in these images. I do not know the codes for this dataset, so I do not exactly what these areas indicate. The other colors associated with the landfire data seem to go a good job.

From: MICHIE Ryan [mailto:Michie.Ryan@deq.state.or.us]
Sent: Tuesday, April 09, 2013 2:54 PM
To: Wu, Jennifer; Carlin, Jayne
Cc: Leinenbach, Peter
Subject: FW: Landsat Project re think

Just resending because I accidently sent this to Peter's private email account. Sorry Peter.

From: MICHIE Ryan
Sent: Tuesday, April 09, 2013 2:45 PM
To: 'wu.jennifer@epa.gov'; 'carlin.jayne@epa.gov'
Cc: 'peter leinenbach'; SEEDS Joshua
Subject: Landsat Project re think

Hi Guys,

I'm having some second thoughts on the landsat project.

After our discussion last week with CADMUS Peter forwarded me information on the LANDFIRE project. LANDFIRE is a federal interagency vegetation, fire/fuels mapping program. They have developed disturbance rasters (that include clear cuts) based on Landsat.

I've been looking at their disturbance products and I think it would satisfy the data needs we have for the years (1999-2008). There is a USFS product that is similar for years prior to 1999 that is good (and would work) but not exactly a perfect fit.

I'd hate to have federal money spent on an effort to produce something when these other products would probably work ok for the majority of years. We would still need data processed for years 2009, 2011, and 2012, however.

I'm wondering your thoughts on scaling the project down to just have CADMUS complete the methods document (Part A) and the processing for just the years mentioned above (Part B)?

OR…

Not doing Part B at all (I will do it) and use the money for something else. If you're looking for other project ideas I have at least one more that is more straight forward.

–

Ryan Michie

Analyst | Watershed Management Section

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